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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/872,275 | 05/31/2001 | Stuart W. Sherlock | 10559-421001/P10435 | 2606 |

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| EXAMINER | |
|---|---|
| TSAI, CAROL S W | |
| **ART UNIT** | **PAPER NUMBER** |
| 2857 | |

DATE MAILED: 05/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application N . | Applicant(s) | |
|---|---|---|---|
| | 09/872,275 | SHERLOCK, STUART W. | |
| | Examiner | Art Unit | |
| | Carol S Tsai | 2857 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *31 May 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 May 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

"40", "41", "43", and "45" shown on Fig. 2.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. Color photographs and color drawings are acceptable only for examination purposes unless a petition filed under 37 CFR 1.84(a)(2) is granted permitting their use as acceptable drawings. In the event that applicant wishes to use the drawings currently on file as acceptable drawings, a petition must be filed for acceptance of the color photographs or color drawings as acceptable drawings. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and an amendment to the first paragraph of the brief description of the drawings section of the specification which states:

> The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the U.S. Patent and Trademark Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings have been satisfied.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3, 4, 13, 14, 23, and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 3, 4, 13, 14, 23, and 24, it is not clear what are meant by "first direction" and "second direction", since there are no clear and specific indications defined in the Specification.

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-4, 6-14, 16-24, and 26-30, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Publication 2002/0130807 to Hall et al. in view of U. S. Patent No. 4,952,193 to Talwar.

With respect to claims 1, 11, and 21, Hall et al. disclose a method of identifying data loss in a transmission system, comprising: shifting one of a received waveform and a transmitted

waveform (see paragraph 0085) and determining differences between the transmitted and received waveforms at various shift points (see paragraph 071).

Hall et al. do not disclose identifying a smallest of the differences between the transmitted and received waveforms.

Talwar teaches identifying a smallest of the differences between the transmitted and received waveforms (see col. 6, line 65 to col. 7, line36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hall et al.'s method to include identifying a smallest of the differences between the transmitted and received waveforms, as taught by Talwar, in order to minimize the corresponding multiple signal components of the received signal caused by the interfering signal from a radio transmitter (see Abstract, lines 1-4).

As to claim 2, 12, and 22, Hall et al. disclose generating a plot of the difference relative to the shift points (see Fig. 4).

Hall et al. do not disclose the smallest of the differences comprising a low vertex point on the plot.

Talwar teaches the smallest of the differences comprising a low vertex point on the plot (see Fig. 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hall et al.'s system to include the smallest of the differences comprising a low vertex point on the plot, as taught by Talwar, in order that user/operator can further identify and analyze the data loss between the transmitted and received waveforms via a plotted graph.

As to claims 3, 4, 13, 14, 23, and 24, Hall et al. also disclose moving the transmitted waveform relative to the received waveform in a first direction; and moving the transmitted waveform relative to the received waveform in a second direction (see paragraph 0085).

As to claims 6, 16, and 26, Holt et al. do not disclose normalizing the transmitted and received waveforms.

Talwar teaches normalizing the transmitted and received waveforms (see Fig. 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hall et al.'s method to include normalizing the transmitted and received waveforms, as taught by Talwar, in order that only positive data of pulses can be displayed.

As to claims 7, 17, and 27 Hall et al. also disclose the transmitted and received waveforms comprising audio data (see paragraph 0129).

As to claims 8, 18, and 28, Hall et al. also disclose the transmission system comprising a transmitter, a transmission medium, and a receiver (see Fig. 20).

As to claims 9, 19, and 29, Hall et al. also disclose the shift points being defined in terms of time in the transmitted and received waveforms (see paragraph 0053).

As to claims 10, 20, and 30, Hall et al. also disclose the shift points being defined in terms of data samples in the transmitted and received waveforms (see paragraph 0094).

7. Claims 5, 15, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. in view of Talwar as applied to claims 1, 11, and 21 above, and further in view of U. S. Patent No. 4,805,096 to Crohn.

As noted above, Hall et al. in combination with Talwar teach all the features of the claimed invention, but do not disclose an odd number of shift points make up the plot.

Crohn teaches an odd number of shift points make up the plot (see col. 13, lines 30-36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hall et al. in combination with Talwar's method to include an odd number of shift points make up the plot, as taught by Crohn, in order to provide both a rising edge and a falling edge in the same assignment (see col. 13, lines 31-32).

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Langford et al. disclose a method for calibrating an impulse radio distance measuring system comprising an impulse radio transceiver by conducting a pulse through a transmit receive switch to an antenna, receiving return energy which has been discharged across the transmit receive switch, determining a time of arrival of the return energy.

Preston et al. disclose determining network delay in order to synchronize a clock in a mobile station with a reference clock.

Wakayama discloses a meteorological radar apparatus which calculates a shift of the pulse synchronization of a transmission pulse signal output from a transmission unit and corrects the transmission timing of the transmission pulse signal based on the shift of the pulse synchronization so that the Doppler velocity of a reference target becomes zero, thereby

preventing deterioration in the measurement accuracy of the Doppler velocity caused by the shift of the pulse synchronization of the transmission pulse signal.

Betts et al. disclose a cooperative feedback system for a compensation system associated with, for example, a transmitter or codes, for enabling the compensation system to improve the accuracy of digital signals transmitted to a digital network.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol S. Tsai whose telephone number is (703) 305-0851. The examiner can normally be reached on Monday-Friday from 7:30 AM to 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on (703) 308-1677. The fax number for TC 2800 is (703) 308-7382. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2800 receptionist whose telephone number is (703) 308-1782.

In order to reduce pendency and avoid potential delays, Group 2800 is encouraging FAXing of responses to Office actions directly into the Group at (703) 308-7382. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 2800 will be promptly forwarded to the examiner.

Carol S. Tsai

05/15/03

MARC S. HOFF
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